

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An IO-requesting method of issuing an IO request to a storage apparatus of a computer system by execution of a program in said computer system, wherein a program identifier set in advance in said program and a separate original request address issued by said program are applied to a first function as two input values that are used to generate one value used as a new request address of the IO request, which is different from said original request address and which is created by said program, said new request address having said program identifier ~~appended thereto~~ embedded therein, wherein said new request address is a same size as said separate original request address, and wherein said IO request is issued by using said new request address.

2. (Previously Presented) A computer executing a first program issuing an IO request to a storage apparatus and a second program receiving said IO request and transmitting said IO request as an IO command to said storage apparatus wherein:

a program identifier set in advance in said first program and an original request address of said IO request issued by said first program are applied to a first

function which accepts the input of said program identifier and said original request address as two input values, and generates one value used as a new request address, which is different from said original request address and which is created by said program, wherein said new request address is a same size as said original request address, and wherein said IO request is issued using said new request address;

said second program has a table associating at least one said program identifier, at least one logical volume existing in said storage apparatus and at least one network address with each other; and

if said IO request is an IO request issued to one said logical volume existing in said storage apparatus that is prescribed to be a protected logical volume, a second function which receives as one input value said new request address and generates, in an operation inverse to that of said first function, said original request address and said program identifier as two output values, said table is searched for said at least one network address associated with said generated program identifier and said at least one logical volume indicated by said generated original request address, and a communication with said storage apparatus is carried out by using said at least one network address as an address of a transmission originator in order to issue an IO command to said original request address.

3. - 6. (Canceled)

7. (Previously Presented) A method of issuing an IO request to a storage apparatus from a computer over a network, comprising:

 setting a program identifier in advance in a first program executed on said computer;

 applying, by said first program, a first function to the program identifier as a first input value and a separate original request address obtained by said first program as a second input value to generate a new request address as an output value of the first function, wherein said new request address is different from said original request address, but of the same overall size; and

 issuing said IO request by said first program using said new request address in said IO request.

8. (Previously Presented) A method according to claim 7, further including steps of

 receiving said IO request by a second program running on said computer;

 applying by said second program a second function to the new request address to derive said program identifier and said original request address; and

 forwarding the IO request by said second program to said storage system using said original request address for the IO request, and using a network address associated with said program identifier as an originating address of said IO request,

when said program identifier indicates that said first program is authorized to access a target of said IO request.

9. (Previously Presented) A method according to claim 8, further including steps of receiving said IO request by a network apparatus in said network, and determining by said network apparatus, on the basis of said network address associated with said program identifier used as the originating address of the IO request, whether or not communication with the target of said IO request in said storage system is permitted.

10. (Previously Presented) A method according to claim 8, further including steps of receiving said IO request by said storage system, and determining by said storage system, on the basis of said network address associated with said program identifier used as the originating address of the IO request, whether or not communication with the target of said IO request in said storage system is permitted.

11. (Previously Presented) A method according to claim 7, further including a step of generating said new request address by said first function by entering said program identifier in unused high order bits of the original request address.